

## REMARKS

Claims 1-24 are pending in the present application. The Examiner has objected to the abstract and claims 4, 7, 18 and 20-24. The Examiner has also rejected claims 1-24.

### **I. ATTORNEY DOCKET NUMBER**

Applicant respectfully requests that the attorney docket number be changed from "WIDC-010/00US" to --15971US01--.

### **II. ABSTRACT**

Applicant respectfully replaces the abstract as originally filed with a new abstract which is enclosed as a separate sheet. The new abstract is a single paragraph on a separate sheet with the range of 50 to 150 words. It is therefore respectfully requested that the objection be withdrawn with respect to the abstract.

### **III. OBJECTIONS**

The Examiner objected to claims 4, 7, 18 and 20-24 for noted informalities. Applicant has amended claims 4, 7, 18, 20, 22 and 24 to overcome the objections. It is therefore respectfully requested that the objection be withdrawn with respect to claims 4, 7, 18 and 20-24.

### **IV. REJECTION OF CLAIMS 1-6 AND 8-24 UNDER 35 U.S.C. § 103(a)**

Claims 1-24 stand rejected under 35 U.S.C. § 103(a) as being obvious over United States Patent No. 4,959,834 ("Aikawa") in view of United States Patent No. 6,535,566 B1 ("Tamamura"). Applicant respectfully traverse the obviousness rejection.

To maintain an obviousness rejection, the combination of Aikawa and Tamamura must teach or suggest each and every element as set forth in the claims. Applicant respectfully submit that the combination of Aikawa and Tamamura does not teach or suggest each and every element as set forth in the claims. For example, claim 1 recites that a first syndrome computing module is operatively coupled to an input shift register and that a second syndrome computing module is operatively coupled to the input shift register. To support the obviousness rejection, the Examiner alleges that the shift register of FIG. 4 of Aikawa teaches these elements. However, the shift registers shown in FIG. 4 of Aikawa are part of the syndrome calculating block 1 of

Aikawa. Thus, the Examiner is alleging that the syndrome calculating block 1 is operatively coupled with an internal component of the syndrome calculating block 1. Applicant respectfully submit that such a statement is illogical. Nevertheless, to further strain the logic, the internal shift register of syndrome calculating block 1 would have to be operatively coupled to a second syndrome calculating block. Aikawa does not teach or suggest the operative coupling as set forth above between, as would have to be alleged by the Examiner for consistency, an internal shift register of syndrome calculating block 1 and a second syndrome calculating block. Furthermore, Tamamura does not teach such an operative coupling between an internal shift register of syndrome calculating block 1 and a second syndrome calculating block.

Neither Aikawa nor Tamamura, individually or combined, teaches a first syndrome computing module for computing first syndromes relating to a first potential phase of a codeword and a second syndrome computing module for computing second syndromes relating to a second potential phase of the codeword as set forth in claim 1. As the Examiner has admitted, Aikawa does not teach at least these elements. In fact, Aikawa teaches away from these elements by "having identical initial phases from the plural m systems and calculates a syndrome from one of the initial phases". Aikawa at col. 7, lines 5-7. Thus, all the phases are identical with the ultimate goal being that all the syndromes are identically zero. Aikawa at col. 7, line 9-13. M.P.E.P. § 2145(X)(D)(1) states that "[a] prior art reference that 'teaches away' from the claimed invention is a significant factor to be considered in determining obviousness". Applicant respectfully submit that the obviousness rejection cannot be maintained in view of Aikawa's teaching away from the claimed invention as set forth in claim 1.

Furthermore, Tamamura does not make up for the teaching deficiencies of Aikawa with respect to the elements as set forth in claim 1. In fact, Tamamura does not even mention "syndrome" anywhere. Applicant respectfully submit that Tamamura is not an appropriate document by which to teach a particular syndrome computing module computing particular syndromes that relate to a particular potential phase of a codeword. After all, if Tamamura does not mention "syndrome" anywhere, then Tamamura cannot teach the deficiencies of Aikawa with respect to syndromes. Even if Tamamura did teach the relationship between the syndrome computing modules and the potential phases of the codeword (which Applicant does not believe to be true), the teachings of Tamamura could not be used to modify the teachings of Aikawa without changing Aikawa's principle of operation. See, e.g., M.P.E.P. § 2143.01 ("[i]f the

proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious"). Changing the principle of operation of Aikawa is strictly prohibited.

For at least the above reasons, the obviousness rejection cannot be maintained with respect to claim 1 and its dependent claim (i.e., claim 2).

Claim 3 recites "a plurality of phase synchronizers associated with a corresponding plurality of potential phases of said codeword, each of said phase synchronizers producing a codeword valid signal upon determining that said input shift register includes a set of said bits corresponding to said codeword". With respect to the phase synchronizers associated with corresponding potential phases, Applicant makes similar arguments, where appropriate, as were made with respect to claim 1. In addition, Applicant respectfully submits that neither Aikawa nor Tamamura teaches a phase synchronizer that produces a codeword valid signal upon determining that the input shift register includes a set of bits corresponding to a codeword. The Examiner alleges that the combination of Aikawa and Tamamura teaches such an input shift register in FIG. 4 of Aikawa. However, Aikawa at col. 6, lines 45-55 merely describes that the shift registers in FIG. 4 of Aikawa store values that become a vector representation a remainder.

For at least the above reasons, the obviousness rejection cannot be maintained with respect to claim 3 and its dependent claims (i.e., claims 4-8).

Claim 9 recites "computing first syndromes relating to a first potential phase of a received codeword; determining, based upon said first syndromes, a first number of errors associated with said first potential phase of said codeword; computing second syndromes relating to a second potential phase of said codeword; determining, based upon said second syndromes, a second number of errors associated with said second potential phase of said codeword". Since claim 9 recites many similar or identical elements as were recited in claims 1 and 3, Applicant makes similar arguments, where appropriate, with respect to claim 9 as were made with respect to claims 1 and 3.

For at least the above reasons, the obviousness rejection cannot be maintained with respect to claim 9 and its dependent claim (i.e., claim 10).

Claim 11 recites "receiving a sequence of bits comprising a codeword; computing a plurality of sets of syndromes, each set of syndromes being associated with a potential phase of

said codeword; identifying a number of errors associated with each said potential phase of said codeword using the one of said sets of syndromes associated with each said potential phase; and determining whether a number of errors associated with any of said potential phases is less than a predetermined threshold". Since claim 11 recites many similar or identical elements as were recited in claims 1 and 3, Applicant makes similar arguments, where appropriate, with respect to claim 11 as were made with respect to claims 1 and 3.

For at least the above reasons, the obviousness rejection cannot be maintained with respect to claim 11 and its dependent claim (i.e., claim 12).

Claim 13 recites "an input shift register for receiving a sequence of bits comprising a codeword, said codeword corresponding to one of said access codes; and a plurality of codeword detection modules associated with a corresponding plurality of potential phases of said codeword, each of said codeword detection modules generating a codeword valid signal when a number of errors associated with an associated one of said potential phases is less than a predetermined threshold". Since claim 13 recites many similar or identical elements as were recited in claims 1 and 3, Applicant makes similar arguments, where appropriate, with respect to claim 13 as were made with respect to claims 1 and 3.

For at least the above reasons, the obviousness rejection cannot be maintained with respect to claim 13 and its dependent claims (i.e., claims 14-19).

Claim 20 recites "a sampling arrangement for generating N bitstreams in response to a received data stream, where N is an integer; a set of N codeword synchronization modules, each of said N codeword synchronization modules providing a plurality of codeword error signals indicative of a number of errors associated with a corresponding plurality of potential phases of one of said N bitstreams; and a phase selection module for identifying one of said codeword error signals as being indicative of a lowest number of errors". *Neither Aikawa nor Tamamura, individually or combined, teaches a sampling arrangement and, in particular, a sampling arrangement for generating N bitstreams in response to a received data stream. In fact, neither Aikawa nor Tamamura even mentions "sampling" anywhere. Accordingly, Aikawa and Tamamura do not teach at least these elements. Since claim 20 also recites many similar or identical elements as were recited in claims 1 and 3, Applicant makes similar arguments, where appropriate, with respect to claim 20 as were made with respect to claims 1 and 3.*

said codeword; identifying a number of errors associated with each said potential phase of said codeword using the one of said sets of syndromes associated with each said potential phase; and determining whether a number of errors associated with any of said potential phases is less than a predetermined threshold". Since claim 11 recites many similar or identical elements as were recited in claims 1 and 3, Applicant makes similar arguments, where appropriate, with respect to claim 11 as were made with respect to claims 1 and 3.

For at least the above reasons, the obviousness rejection cannot be maintained with respect to claim 11 and its dependent claim (i.e., claim 12).

Claim 13 recites "an input shift register for receiving a sequence of bits comprising a codeword, said codeword corresponding to one of said access codes; and a plurality of codeword detection modules associated with a corresponding plurality of potential phases of said codeword, each of said codeword detection modules generating a codeword valid signal when a number of errors associated with an associated one of said potential phases is less than a predetermined threshold". Since claim 13 recites many similar or identical elements as were recited in claims 1 and 3, Applicant makes similar arguments, where appropriate, with respect to claim 13 as were made with respect to claims 1 and 3.

For at least the above reasons, the obviousness rejection cannot be maintained with respect to claim 13 and its dependent claims (i.e., claims 14-19).

Claim 20 recites "a sampling arrangement for generating N bitstreams in response to a received data stream, where N is an integer; a set of N codeword synchronization modules, each of said N codeword synchronization modules providing a plurality of codeword error signals indicative of a number of errors associated with a corresponding plurality of potential phases of one of said N bitstreams; and a phase selection module for identifying one of said codeword error signals as being indicative of a lowest number of errors". *Neither Aikawa nor Tamamura, individually or combined, teaches a sampling arrangement and, in particular, a sampling arrangement for generating N bitstreams in response to a received data stream. In fact, neither Aikawa nor Tamamura even mentions "sampling" anywhere. Accordingly, Aikawa and Tamamura do not teach at least these elements. Since claim 20 also recites many similar or identical elements as were recited in claims 1 and 3, Applicant makes similar arguments, where appropriate, with respect to claim 20 as were made with respect to claims 1 and 3.*

For at least the above reasons, the obviousness rejection cannot be maintained with respect to claim 20 and its dependent claims (i.e., claims 21-24).

It is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 1-24.

#### **V. INFERENCE ARGUMENT MADE BY EXAMINER**

Claim 24 recites a sampling arrangement, which is recited in claim 23 and 20, that further includes a demultiplexer. The Examiner alleges that a demultiplexer may be inferred by the interconnecting junction found in FIG. 12 of Tamamura. Applicant respectfully disagree with such an inference. The fact that the Examiner must rely upon a naked inference without reference to any supporting evidence in Tamamura supports Applicant's case that Tamamura does not teach a demultiplexer as set forth in claim 24. Applicant can just as easy "infer" that FIG. 12 represents, on its face, a connection without a demultiplexer in which S21-1, S21-2 and S21-n all receive the same signal at the same time via the "dot". On its face, FIG. 12 is rebuttal evidence which supports Applicant's interpretation unless the Examiner can provide compelling evidence in Tamamura in support of his interpretation. For at least the above reasons, Applicant respectfully submits that the obviousness rejection cannot be maintained with respect to claim 24. It is therefore respectfully requested that the rejection be withdrawn with respect to claim 24.

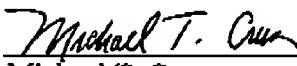
VI. CONCLUSION

In view of at least the foregoing, it is respectfully submitted that the pending claims 1-24 are in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

Please charge any required fees not paid herewith or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

Dated: December 20, 2004

Respectfully submitted,

  
Michael T. Cruz  
Reg. No. 44,636

McAndrews, Held & Malloy, Ltd.  
500 West Madison Street, 34th Floor  
Chicago, Illinois 60661-2565  
Telephone: (312) 775-8084  
Facsimile: (312) 775-8100